

RAW SEQUENCE LISTING ERROR REPORT

The Biotechnology Systems Branch of the Scientific and Technical Information Center (STIC) detected errors when processing the following computer readable form:

Application Serial Number: US/09/487,841
Source: IPW/61
Date Processed by STIC: 12-22-04

THE ATTACHED PRINTOUT EXPLAINS DETECTED ERRORS.

PLEASE FORWARD THIS INFORMATION TO THE APPLICANT BY EITHER:

- 1) INCLUDING A COPY OF THIS PRINTOUT IN YOUR NEXT COMMUNICATION TO THE APPLICANT, WITH A NOTICE TO COMPLY or,
- 2) TELEPHONING APPLICANT AND FAXING A COPY OF THIS PRINTOUT, WITH A NOTICE TO COMPLY

FOR CRF SUBMISSION AND PATENTIN SOFTWARE QUESTIONS, PLEASE CONTACT MARK SPENCER, TELEPHONE: 571-272-2510; FAX: 571-273-0221

TO REDUCE ERRORED SEQUENCE LISTINGS, PLEASE USE THE CHECKER VERSION 4.2 PROGRAM, ACCESSIBLE THROUGH THE U.S. PATENT AND TRADEMARK OFFICE WEBSITE. SEE BELOW FOR ADDRESS:

<http://www.uspto.gov/web/offices/pac/checker/chkrnote.htm>

Applicants submitting genetic sequence information electronically on diskette or CD-Rom should be aware that there is a possibility that the disk/CD-Rom may have been affected by treatment given to all incoming mail.

Please consider using alternate methods of submission for the disk/CD-Rom or replacement disk/CD-Rom.

Any reply including a sequence listing in electronic form should NOT be sent to the 20231 zip code address for the United States Patent and Trademark Office, and instead should be sent via the following to the indicated addresses:

1. EFS-Bio (<http://www.uspto.gov/ebc/efs/downloads/documents.htm>), EFS Submission User Manual - ePAVE)
2. U.S. Postal Service: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450
3. Hand Carry, Federal Express, United Parcel Service, or other delivery service (EFFECTIVE 06/05/04):
U.S. Patent and Trademark Office, 220 20th Street S., Customer Window, Mail Stop Sequence, Crystal Plaza Two, Lobby, Room 1B03, Arlington, VA 22202

Revised 05/17/04


Raw Sequence Listing Error Summary

ERROR DETECTED

SUGGESTED CORRECTION

SERIAL NUMBER: 09/487,841

ATTN: NEW RULES CASES: PLEASE DISREGARD ENGLISH "ALPHA" HEADERS, WHICH WERE INSERTED BY PTO SOFTWARE

- 1 ☒ Wrapped Nucleics
Wrapped Aminos The number/text at the end of each line "wrapped" down to the next line. This may occur if your file was retrieved in a word processor after creating it. Please adjust your right margin to .3; this will prevent "wrapping." 
- 2 Invalid Line Length The rules require that a line not exceed 72 characters in length. This includes white spaces.
- 3 Misaligned Amino Numbering The numbering under each 5' amino acid is misaligned. Do not use tab codes between numbers; use space characters, instead.
- 4 Non-ASCII The submitted file was not saved in ASCII(DOS) text, as required by the Sequence Rules. Please ensure your subsequent submission is saved in ASCII text.
- 5 Variable Length Sequence(s) contain n's or Xaa's representing more than one residue. Per Sequence Rules, each n or Xaa can only represent a single residue. Please present the maximum number of each residue having variable length and indicate in the <220>-<223> section that some may be missing.
- 6 PatentIn 2.0 "bug" A "bug" in PatentIn version 2.0 has caused the <220>-<223> section to be missing from amino acid sequence(s). Normally, PatentIn would automatically generate this section from the previously coded nucleic acid sequence. Please manually copy the relevant <220>-<223> section to the subsequent amino acid sequence. This applies to the mandatory <220>-<223> sections for Artificial or Unknown sequences.
- 7 Skipped Sequences (OLD RULES) Sequence(s) missing. If intentional, please insert the following lines for each skipped sequence:
(2) INFORMATION FOR SEQ ID NO X (insert SEQ ID NO where "X" is shown)
(i) SEQUENCE CHARACTERISTICS (Do not insert any subheadings under this heading!)
(xi) SEQUENCE DESCRIPTION SEQ ID NO X (insert SEQ ID NO where "X" is shown)
This sequence is intentionally skipped.

Please also adjust the "(ii) NUMBER OF SEQUENCES" response to include the skipped sequences.
- 8 Skipped Sequences (NEW RULES) Sequence(s) missing. If intentional, please insert the following lines for each skipped sequence:
<210> sequence id number
<400> sequence id number
000
- 9 Use of n's or Xaa's (NEW RULES) Use of n's and/or Xaa's have been detected in the Sequence Listing.
Per 1.823 of Sequence Rules, use of <220>-<223> is MANDATORY if n's or Xaa's are present.
In <220> to <223> section, please explain location of n or Xaa, and which residue n or Xaa represents.
- 10 Invalid <213> Response Per 1.823 of Sequence Rules, the only valid <213> responses are: Unknown, Artificial Sequence, or scientific name (Genus/species). <220>-<223> section is required when <213> response is Unknown or Artificial Sequence.
- 11 Use of <220> Sequence(s) missing the <220> "Feature" and associated numeric identifiers and responses.
Use of <220> to <223> is MANDATORY if <213> "Organism" response is "Artificial Sequence" or "Unknown." Please explain source of genetic material in <220> to <223> section.
(See "Federal Register," 63(01/1998, Vol. 63, No. 104, pp. 29631-32) (Sec. 1.823 of Sequence Rules)
- 12 PatentIn 2.0 "bug" Please do not use "Copy to Disk" function of PatentIn version 2.0. This causes a corrupted file, resulting in missing mandatory numeric identifiers and responses (as indicated on raw sequence listing). Instead, please use "File Manager" or any other manual means to copy file to floppy disk.
- 13 Misuse of n/Xaa "n" can only represent a single nucleotide; "Xaa" can only represent a single amino acid.



IFW16

RAW SEQUENCE LISTING

DATE: 12/22/2004

PATENT APPLICATION: US/09/487,841

TIME: 15:09:45

Input Set : A:\seqlist.txt

Output Set: N:\CRF4\12222004\I487841.raw

4 <110> APPLICANT: Gravel, Roy A,
 5 Rozen, Rima
 6 Leclerc, Daniel
 7 Wilson, Aaron
 8 Rosenblatt, David
 10 <120> TITLE OF INVENTION: HUMAN METHIONINE SYNTHASE REDUCTASE:
 11 CLONING, AND METHODS FOR EVALUATING RISK OF NEURAL TUBE
 12 DEFECTS, CARDIOVASCULAR DISEASE, CANCER, AND DOWN'S SYNDROME
 15 <130> FILE REFERENCE: 50004/003004
 17 <140> CURRENT APPLICATION NUMBER: 09/487,841
 18 <141> CURRENT FILING DATE: 2000-01-19
 20 <150> PRIOR APPLICATION NUMBER: 09/371,347
 21 <151> PRIOR FILING DATE: 1999-08-10
 23 <150> PRIOR APPLICATION NUMBER: 09/232,028
 24 <151> PRIOR FILING DATE: 1999-01-15
 26 <150> PRIOR APPLICATION NUMBER: 60/071,622
 27 <151> PRIOR FILING DATE: 1998-01-16
 29 <160> NUMBER OF SEQ ID NOS: 61
 31 <170> SOFTWARE: FastSEQ for Windows Version 4.0

Does Not Comply
 Corrected Diskette Needed

(pg. 3, 5-19, 12, 14, 16)

ERRORED SEQUENCES

315 <210> SEQ ID NO: 21
 316 <211> LENGTH: 698
 317 <212> TYPE: PRT
 318 <213> ORGANISM: Homo sapiens
 320 <400> SEQUENCE: 21
 321 Met Arg Arg Phe Leu Leu Tyr Ala Thr Gln Gln Gly Gln Ala Lys
 322 1 5 10 15
 323 Ala Ile Ala Glu Glu Met Cys Glu Gln Ala Val Val His Gly Phe Ser
 324 20 25 30
 325 Ala Asp Leu His Cys Ile Ser Glu Ser Asp Lys Tyr Asp Leu Lys Thr
 326 35 40 45
 327 Glu Thr Ala Pro Leu Val Val Val Ser Thr Thr Gly Thr Gly Asp
 328 50 55 60
 329 Pro Pro Asp Thr Ala Arg Lys Phe Val Lys Glu Ile Gln Asn Gln Thr
 330 65 70 75 80
 331 Leu Pro Val Asp Phe Phe Ala His Leu Arg Tyr Gly Leu Leu Gly Leu
 332 85 90 95
 333 Gly Asp Ser Glu Tyr Thr Tyr Phe Cys Asn Gly Gly Lys Ile Ile Asp
 334 100 105 110
 335 Lys Arg Leu Gln Glu Leu Gly Ala Arg His Phe Tyr Asp Thr Gly His

RAW SEQUENCE LISTING

DATE: 12/22/2004

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TIME: 15:09:45

Input Set : A:\seqlist.txt

Output Set: N:\CRF4\12222004\I487841.raw

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336          115          120          125
337 Ala Asp Asp Cys Val Gly Leu Glu Leu Val Val Glu Pro Trp Ile Ala
338          130          135          140
339 Gly Leu Trp Pro Ala Leu Arg Lys His Phe Arg Ser Ser Arg Gly Gln
340 145          150          155          160
341 Glu Glu Ile Ser Gly Ala Leu Pro Val Ala Ser Pro Ala Ser Leu Arg
342          165          170          175
343 Thr Asp Leu Val Lys Ser Glu Leu Leu His Ile Glu Ser Gln Val Glu
344          180          185          190
345 Leu Leu Arg Phe Asp Asp Ser Gly Arg Lys Asp Ser Glu Val Leu Lys
346          195          200          205
347 Gln Asn Ala Val Asn Ser Asn Gln Ser Asn Val Val Ile Glu Asp Phe
348          210          215          220
349 Glu Ser Ser Leu Thr Arg Ser Val Pro Pro Leu Ser Gln Ala Ser Leu
350 225          230          235          240
351 Asn Ile Pro Gly Leu Pro Pro Glu Tyr Leu Gln Val His Leu Gln Glu
352          245          250          255
353 Ser Leu Gly Gln Glu Glu Ser Gln Val Ser Val Thr Ser Ala Asp Pro
354          260          265          270
355 Val Phe Gln Val Pro Ile Ser Lys Ala Val Gln Leu Thr Thr Asn Asp
356          275          280          285
357 Ala Ile Lys Thr Thr Leu Leu Val Glu Leu Asp Ile Ser Asn Thr Asp
358          290          295          300
359 Phe Ser Tyr Gln Pro Gly Asp Ala Phe Ser Val Ile Cys Pro Asn Ser
360 305          310          315          320
361 Asp Ser Glu Val Gln Ser Leu Leu Gln Arg Leu Gln Leu Glu Asp Lys
362          325          330          335
363 Arg Glu His Cys Val Leu Leu Lys Ile Lys Ala Asp Thr Lys Lys Lys
364          340          345          350
365 Gly Ala Thr Leu Pro Gln His Ile Pro Ala Gly Cys Ser Leu Gln Phe
366          355          360          365
367 Ile Phe Thr Trp Cys Leu Glu Ile Arg Ala Ile Pro Lys Lys Ala Phe
368          370          375          380
369 Leu Arg Ala Leu Val Asp Tyr Thr Ser Asp Ser Ala Glu Lys Arg Arg
370 385          390          395          400
371 Leu Gln Glu Leu Cys Ser Lys Gln Gly Ala Ala Asp Tyr Ser Arg Phe
372          405          410          415
373 Val Arg Asp Ala Cys Ala Cys Leu Leu Asp Leu Leu Leu Ala Phe Pro
374          420          425          430
375 Ser Cys Gln Pro Pro Leu Ser Leu Leu Leu Glu His Leu Pro Lys Leu
376          435          440          445
377 Gln Pro Arg Pro Tyr Ser Cys Ala Ser Ser Ser Leu Phe His Pro Gly
378          450          455          460
379 Lys Leu His Phe Val Phe Asn Ile Val Glu Phe Leu Ser Thr Ala Thr
380 465          470          475          480
381 Thr Glu Val Leu Arg Lys Gly Val Cys Thr Gly Trp Leu Ala Leu Leu
382          485          490          495
383 Val Ala Ser Val Leu Gln Pro Asn Ile His Ala Ser His Glu Asp Ser
384          500          505          510

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Input Set : A:\seqlist.txt

Output Set: N:\CRF4\12222004\I487841.raw

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385 Gly Lys Ala Leu Ala Pro Lys Ile Ser Ile Ser Pro Arg Thr Thr Asn
386      515      520      525
387 Ser Phe His Leu Pro Asp Asp Pro Ser Ile Pro Ile Met Val Gly
388      530      535      540
389 Pro Gly Thr Gly Ile Ala Pro Phe Ile Gly Phe Leu Gln His Arg Glu
390 545      550      555      560
391 Lys Leu Gln Glu Gln His Pro Asp Gly Asn Phe Gly Ala Met Trp Leu
392      565      570      575
393 Phe Phe Gly Cys Arg His Lys Asp Arg Asp Tyr Leu Phe Arg Lys Glu
394      580      585      590
395 Leu Arg His Phe Leu Lys His Gly Ile Leu Thr His Leu Lys Val Ser
396      595      600      605
397 Phe Ser Arg Asp Ala Pro Val Gly Glu Glu Glu Ala Pro Ala Lys Tyr
398      610      615      620
399 Val Gln Asp Asn Ile Gln Leu His Gly Gln Gln Val Ala Arg Ile Leu
400 625      630      635      640
401 Leu Gln Glu Asn Gly His Ile Tyr Val Cys Gly Asp Ala Lys Asn Met
402      645      650      655
403 Ala Lys Asp Val His Asp Ala Leu Val Gln Ile Ile Ser Lys Glu Val
404      660      665      670
E--> 405
Gly Val Glu Lys Leu Glu Ala Met Lys Thr Leu Ala Thr Leu Lys Glu
407 <210> SEQ ID NO: 22
408 <211> LENGTH: 682
409 <212> TYPE: PRT
410 <213> ORGANISM: Caenorhabditis elegans
412 <400> SEQUENCE: 22
413 Met Thr Asp Phe Leu Ile Ala Phe Gly Ser Gln Thr Gly Gln Ala Glu
414 1      5      10      15
415 Thr Ile Ala Lys Ser Leu Lys Glu Lys Ala Glu Leu Ile Gly Leu Thr
416      20      25      30
417 Pro Arg Leu His Ala Leu Asp Glu Asn Glu Lys Lys Phe Asn Leu Asn
418      35      40      45
419 Glu Glu Lys Leu Cys Ala Ile Val Val Ser Ser Thr Gly Asp Gly Asp
420      50      55      60
421 Ala Pro Asp Asn Cys Ala Arg Phe Val Arg Arg Ile Asn Arg Asn Ser
422 65      70      75      80
423 Leu Glu Asn Glu Tyr Leu Lys Asn Leu Asp Tyr Val Leu Leu Gly Leu
424      85      90      95
425 Gly Asp Ser Asn Tyr Ser Ser Tyr Gln Thr Ile Pro Arg Lys Ile Asp
426      100      105      110
427 Lys Gln Leu Thr Ala Leu Gly Ala Asn Arg Leu Phe Asp Arg Ala Glu
428      115      120      125
429 Ala Asp Asp Gln Val Gly Leu Glu Leu Glu Val Glu Pro Trp Ile Glu
430      130      135      140
431 Lys Phe Phe Ala Thr Leu Ala Ser Arg Phe Asp Ile Ser Ala Asp Lys
432 145      150      155      160
433 Met Asn Ala Ile Thr Glu Ser Ser Asn Leu Lys Leu Asn Gln Val Lys
434      165      170      175
435 Thr Glu Glu Glu Lys Lys Ala Leu Leu Gln Lys Arg Ile Glu Asp Glu

```

675

680

- See
item #
1 on
Error
summary
sheet.
This is a
global
error
throughout
sequence.

RAW SEQUENCE LISTING

DATE: 12/22/2004

PATENT APPLICATION: US/09/487,841

TIME: 15:09:45

Input Set : A:\seqlist.txt

Output Set: N:\CRF4\12222004\I487841.raw

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436          180          185          190
437 Glu Ser Asp Asp Glu Gly Arg Gly Arg Val Ile Gly Ile Asp Met Leu
438          195          200          205
439 Ile Pro Glu His Tyr Asp Tyr Pro Glu Ile Ser Leu Leu Lys Gly Ser
440          210          215          220
441 Gln Thr Leu Ser Asn Asp Glu Asn Leu Arg Val Pro Ile Ala Pro Gln
442 225          230          235          240
443 Pro Phe Ile Val Ser Ser Val Ser Asn Arg Lys Leu Pro Glu Asp Thr
444          245          250          255
445 Lys Leu Glu Trp Gln Asn Leu Cys Lys Met Pro Gly Val Val Thr Lys
446          260          265          270
447 Pro Phe Glu Val Leu Val Val Ser Ala Glu Phe Val Thr Asp Pro Phe
448          275          280          285
449 Ser Lys Lys Ile Lys Thr Lys Arg Met Ile Thr Val Asp Phe Gly Asp
450          290          295          300
451 His Ala Ala Glu Leu Gln Tyr Glu Pro Gly Asp Ala Ile Tyr Phe Cys
452 305          310          315          320
453 Val Pro Asn Pro Ala Leu Glu Val Asn Phe Ile Leu Lys Arg Cys Gly
454          325          330          335
455 Val Leu Asp Ile Ala Asp Gln Gln Cys Glu Leu Ser Ile Asn Pro Lys
456          340          345          350
457 Thr Glu Lys Ile Asn Ala Gln Ile Pro Gly His Val His Lys Ile Thr
458          355          360          365
459 Thr Leu Arg His Met Phe Thr Thr Cys Leu Asp Ile Arg Arg Ala Pro
460          370          375          380
461 Gly Arg Pro Leu Ile Arg Val Leu Ala Glu Ser Thr Ser Asp Pro Asn
462 385          390          395          400
463 Glu Lys Arg Arg Leu Leu Glu Leu Cys Ser Ala Gln Gly Met Lys Asp
464          405          410          415
465 Phe Thr Asp Phe Val Arg Thr Pro Gly Leu Ser Leu Ala Asp Met Leu
466          420          425          430
467 Phe Ala Phe Pro Asn Val Lys Pro Pro Val Asp Arg Leu Ile Glu Leu
468          435          440          445
469 Leu Pro Arg Leu Ile Pro Arg Pro Tyr Ser Met Ser Ser Tyr Glu Asn
470          450          455          460
471 Arg Lys Ala Arg Leu Ile Tyr Ser Glu Met Glu Phe Pro Ala Thr Asp
472 465          470          475          480
473 Gly Arg Arg His Ser Arg Lys Gly Leu Ala Thr Asp Trp Leu Asn Ser
474          485          490          495
475 Leu Arg Ile Gly Asp Lys Val Gln Val Leu Gly Lys Glu Pro Ala Arg
476          500          505          510
477 Phe Arg Leu Pro Pro Leu Gly Met Thr Lys Asn Ser Ala Gly Lys Leu
478          515          520          525
479 Pro Leu Leu Met Val Gly Pro Gly Thr Gly Val Ser Val Phe Leu Ser
480          530          535          540
481 Phe Leu His Phe Leu Arg Lys Leu Lys Gln Asp Ser Pro Ser Asp Phe
482 545          550          555          560
483 Val Asp Val Pro Arg Val Leu Phe Phe Gly Cys Arg Asp Ser Ser Val
484          565          570          575

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TIME: 15:09:45

Input Set : A:\seqlist.txt

Output Set: N:\CRF4\12222004\I487841.raw

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485 Asp Ala Ile Tyr Met Ser Glu Leu Glu Met Phe Val Ser Glu Gly Ile
486                               580                               585                               590
487 Leu Thr Asp Leu Ile Ile Cys Glu Ser Glu Gln Lys Gly Glu Arg Val
488                               595                               600                               605
489 Gln Asp Gly Leu Arg Lys Tyr Leu Asp Lys Val Leu Pro Phe Leu Thr
490                               610                               615                               620
491 Ala Ser Thr Glu Ser Lys Ile Phe Ile Cys Gly Asp Ala Lys Gly Met
492 625                               630                               635                               640
493 Ser Lys Asp Val Trp Gln Cys Phe Ser Asp Ile Val Ala Ser Asp Gln
494                               645                               650                               655
E--> 495
Gly Ile Pro Asp Leu Glu Ala Lys Lys Lys Leu Met Asp Leu Lys Lys                               660
497 <210> SEQ ID NO: 23
498 <211> LENGTH: 677
499 <212> TYPE: PRT
500 <213> ORGANISM: Homo sapiens
502 <400> SEQUENCE: 23
E--> 503 Met Gly Asp Ser His Val Asp Thr Ser Ser Thr Val Ser Glu Ala Val
504 1                               5                               10                               15
505 Ala Glu Glu Val Ser Leu Phe Ser Met Thr Asp Met Ile Leu Phe Ser
506                               20                               25                               30
507 Leu Ile Val Gly Leu Leu Thr Tyr Trp Phe Leu Phe Arg Lys Lys Lys
508                               35                               40                               45
509 Glu Glu Val Pro Glu Phe Thr Lys Ile Gln Thr Leu Thr Ser Ser Val
510                               50                               55                               60
511 Arg Glu Ser Ser Phe Val Glu Lys Met Lys Lys Thr Gly Arg Asn Ile
512 65                               70                               75                               80
513 Ile Val Phe Tyr Gly Ser Gln Thr Gly Thr Ala Glu Glu Phe Ala Asn
514                               85                               90                               95
515 Arg Leu Ser Lys Asp Ala His Arg Tyr Gly Met Arg Gly Met Ser Ala
516                               100                              105                              110
517 Asp Pro Glu Glu Tyr Asp Leu Ala Asp Leu Ser Ser Leu Pro Glu Ile
518                               115                              120                              125
519 Asp Asn Ala Leu Val Val Phe Cys Met Ala Thr Tyr Gly Glu Gly Asp
520                               130                              135                              140
521 Pro Thr Asp Asn Ala Gln Asp Phe Tyr Asp Trp Leu Gln Glu Thr Asp
522 145                              150                              155                              160
523 Val Asp Leu Ser Gly Val Lys Phe Ala Val Phe Gly Leu Gly Asn Lys
524                               165                              170                              175
525 Thr Tyr Glu His Phe Asn Ala Met Gly Lys Tyr Val Asp Lys Arg Leu
526                               180                              185                              190
527 Glu Gln Leu Gly Ala Gln Arg Ile Phe Glu Leu Gly Leu Gly Asp Asp
528                               195                              200                              205
529 Asp Gly Asn Leu Glu Glu Asp Phe Ile Thr Trp Arg Glu Gln Phe Trp
530                               210                              215                              220
531 Pro Ala Val Cys Glu His Phe Gly Val Glu Ala Thr Gly Glu Glu Ser
532 225                              230                              235                              240
533 Ser Ile Arg Gln Tyr Glu Leu Val Val His Thr Asp Ile Asp Ala Ala
534                               245                              250                              255
535 Lys Val Tyr Met Gly Glu Met Gly Arg Leu Lys Ser Tyr Glu Asn Gln

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see
item #
1 on
error
summary
sheet

RAW SEQUENCE LISTING

DATE: 12/22/2004

PATENT APPLICATION: US/09/487,841

TIME: 15:09:45

Input Set : A:\seqlist.txt\

Output Set : N:\CRF4\12222004\I487841.raw

```

536          260          265          270
537 Lys Pro Pro Phe Asp Ala Lys Asn Pro Phe Leu Ala Ala Val Thr Thr
538          275          280          285
539 Asn Arg Lys Leu Asn Gln Gly Thr Glu Arg His Leu Met His Leu Glu
540          290          295          300
541 Leu Asp Ile Ser Asp Ser Lys Ile Arg Tyr Glu Ser Gly Asp His Val
542 305          310          315          320
543 Ala Val Tyr Pro Ala Asn Asp Ser Ala Leu Val Asn Gln Leu Gly Lys
544          325          330          335
545 Ile Leu Gly Ala Asp Leu Asp Val Val Met Ser Leu Asn Asn Leu Asp
546          340          345          350
547 Glu Glu Ser Asn Lys Lys His Pro Phe Pro Cys Pro Thr Ser Tyr Arg
548          355          360          365
549 Thr Ala Leu Thr Tyr Tyr Leu Asp Ile Thr Asn Pro Pro Arg Thr Asn
550          370          375          380
551 Val Leu Tyr Glu Leu Ala Gln Tyr Ala Ser Glu Pro Ser Glu Gln Glu
552 385          390          395          400
553 Leu Leu Arg Lys Met Ala Ser Ser Ser Gly Glu Gly Lys Glu Leu Tyr
554          405          410          415
555 Leu Ser Trp Val Val Glu Ala Arg Arg His Ile Leu Ala Ile Leu Gln
556          420          425          430
557 Asp Cys Pro Ser Leu Arg Pro Pro Ile Asp His Leu Cys Glu Leu Leu
558          435          440          445
559 Pro Arg Leu Gln Ala Arg Tyr Tyr Ser Ile Ala Ser Ser Ser Lys Val
560          450          455          460
561 His Pro Asn Ser Val His Ile Cys Ala Val Val Val Glu Tyr Glu Thr
562 465          470          475          480
563 Lys Ala Gly Arg Ile Asn Lys Gly Val Ala Thr Asn Trp Leu Arg Ala
564          485          490          495
565 Lys Glu Pro Val Gly Glu Asn Gly Gly Arg Ala Leu Val Pro Met Phe
566          500          505          510
567 Val Arg Lys Ser Gln Phe Arg Leu Pro Phe Lys Ala Thr Thr Pro Val
568          515          520          525
569 Ile Met Val Gly Pro Gly Thr Gly Val Ala Pro Phe Ile Gly Phe Ile
570          530          535          540
571 Gln Glu Arg Ala Trp Leu Arg Gln Gln Gly Lys Glu Val Gly Glu Thr
572 545          550          555          560
573 Leu Leu Tyr Tyr Gly Cys Arg Arg Ser Asp Glu Asp Tyr Leu Tyr Arg
574          565          570          575
575 Glu Glu Leu Ala Gln Phe His Arg Asp Gly Ala Leu Thr Gln Leu Asn
576          580          585          590
577 Val Ala Phe Ser Arg Glu Gln Ser His Lys Val Tyr Val Gln His Leu
578          595          600          605
579 Leu Lys Gln Asp Arg Glu His Leu Trp Lys Leu Ile Glu Gly Gly Ala
580          610          615          620
581 His Ile Tyr Val Cys Gly Asp Ala Arg Asn Met Ala Arg Asp Val Gln
582 625          630          635          640
583 Asn Thr Phe Tyr Asp Ile Val Ala Glu Leu Gly Ala Met Glu His Ala
E--> 584
          645          650          655          Gln Ala Val Asp Tyr Ile Lys Lys

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See item
#1 on
error
summary
sheet 12/22/04

RAW SEQUENCE LISTING

DATE: 12/22/2004

PATENT APPLICATION: US/09/487,841

TIME: 15:09:45

Input Set : A:\seqlist.txt

Output Set: N:\CRF4\12222004\I487841.raw

✓ SAME
errors

648 <210> SEQ ID NO: 25

649 <211> LENGTH: 18

650 <212> TYPE: PRT

651 <213> ORGANISM: Homo sapiens

653 <400> SEQUENCE: 25

E--> 654

Gly Ala Met Trp Leu Phe Phe Gly Cys Arg His Lys Asp Arg Asp Tyr 1

656 <210> SEQ ID NO: 26

657 <211> LENGTH: 18

658 <212> TYPE: PRT

659 <213> ORGANISM: Homo sapiens

661 <400> SEQUENCE: 26

E--> 662

Gly Glu Thr Leu Leu Tyr Tyr Gly Cys Arg Arg Ser Asp Glu Asp Tyr 1

664 <210> SEQ ID NO: 27

665 <211> LENGTH: 18

666 <212> TYPE: PRT

667 <213> ORGANISM: Oryctolagus cuniculus

669 <400> SEQUENCE: 27

E--> 670

Gly Glu Thr Leu Leu Tyr Tyr Gly Cys Arg Arg Ala Ala Glu Asp Tyr 1

672 <210> SEQ ID NO: 28

673 <211> LENGTH: 18

674 <212> TYPE: PRT

675 <213> ORGANISM: Drosophila melanogaster

677 <400> SEQUENCE: 28

E--> 678

Gly Glu Ser Ile Leu Tyr Phe Gly Cys Arg Lys Arg Ser Glu Asp Tyr 1

680 <210> SEQ ID NO: 29

681 <211> LENGTH: 18

682 <212> TYPE: PRT

683 <213> ORGANISM: Vigna radiata

685 <400> SEQUENCE: 29

E--> 686

Gly Pro Ala Leu Leu Phe Phe Gly Cys Arg Asn Arg Gln Met Asp Phe 1

688 <210> SEQ ID NO: 30

689 <211> LENGTH: 18

690 <212> TYPE: PRT

691 <213> ORGANISM: Aspergillus niger

693 <400> SEQUENCE: 30

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Gly Pro Thr Val Leu Phe Phe Gly Cys Arg Lys Ser Asp Glu Asp Phe 1

696 <210> SEQ ID NO: 31

697 <211> LENGTH: 18

698 <212> TYPE: PRT

699 <213> ORGANISM: Homo sapiens

701 <400> SEQUENCE: 31

E--> 702

Cys Pro Met Val Leu Val Phe Gly Cys Arg Gln Ser Lys Ile Asp His 1

704 <210> SEQ ID NO: 32

705 <211> LENGTH: 18

706 <212> TYPE: PRT

707 <213> ORGANISM: Homo sapiens

5 See
item #
1 on
error
summary
sheet

709 <400> SEQUENCE: 32

E--> 710

Gly Arg Met Thr Leu Val Phe Gly Cys Arg Arg Pro Asp Glu Asp His 1

5

712 <210> SEQ ID NO: 33

*SAME
error*

RAW SEQUENCE LISTING

DATE: 12/22/2004

PATENT APPLICATION: US/09/487,841

TIME: 15:09:45

Input Set : A:\seqlist.txt

Output Set: N:\CRF4\12222004\I487841.raw

713 <211> LENGTH: 18
 714 <212> TYPE: PRT
 715 <213> ORGANISM: Homo sapiens
 717 <400> SEQUENCE: 33
 E--> 718
 Thr Pro Met Thr Leu Val Phe Gly Cys Arg Cys Ser Gln Leu Asp His 1
 720 <210> SEQ ID NO: 34
 721 <211> LENGTH: 18
 722 <212> TYPE: PRT
 723 <213> ORGANISM: Oryctolagus cuniculus
 725 <400> SEQUENCE: 34
 E--> 726
 Gly Arg Met Thr Leu Val Phe Gly Cys Arg His Pro Glu Glu Asp His 1
 728 <210> SEQ ID NO: 35
 729 <211> LENGTH: 18
 730 <212> TYPE: PRT
 731 <213> ORGANISM: Gallus gallus
 733 <400> SEQUENCE: 35
 E--> 734
 Gly Asp Met Ile Leu Leu Phe Gly Cys Arg His Pro Asp Met Asp His 1
 736 <210> SEQ ID NO: 36
 737 <211> LENGTH: 18
 738 <212> TYPE: PRT
 739 <213> ORGANISM: Escherichia coli
 741 <400> SEQUENCE: 36
 E--> 742
 Gly Lys Asn Trp Leu Phe Phe Gly Asn Pro His Phe Thr Glu Asp Phe 1
 744 <210> SEQ ID NO: 37
 745 <211> LENGTH: 18
 746 <212> TYPE: PRT
 747 <213> ORGANISM: Saccharomyces cerevisiae
 749 <400> SEQUENCE: 37
 E--> 750
 Gly Glu Val Phe Leu Tyr Leu Gly Ser Arg His Lys Arg Glu Glu Tyr 1
 752 <210> SEQ ID NO: 38
 753 <211> LENGTH: 18
 754 <212> TYPE: PRT
 755 <213> ORGANISM: Thiocapsa roseopersicina
 757 <400> SEQUENCE: 38
 E--> 758
 Gly Arg Asn Trp Leu Ile Phe Gly Asn Arg His Phe His Arg Asp Phe 1
 760 <210> SEQ ID NO: 39
 761 <211> LENGTH: 19
 762 <212> TYPE: PRT
 763 <213> ORGANISM: Pisum sativum
 765 <400> SEQUENCE: 39
 E--> 766
 Gly Leu Ala Trp Leu Phe Leu Gly Val Ala Asn Val Asp Ser Leu Leu 1
 768 <210> SEQ ID NO: 40
 769 <211> LENGTH: 18
 770 <212> TYPE: PRT
 771 <213> ORGANISM: Spinacia oleracea
 773 <400> SEQUENCE: 40

✓ Same errors

5 See item #

5 1 on
= error
summary
Sheet.

E--> 774

Gly Leu Ala Trp Leu Phe Leu Gly Val Pro Thr Ser Ser Ser Leu L u 1

818 <210> SEQ ID NO: 42

819 <211> LENGTH: 698

*Same
error* 5

RAW SEQUENCE LISTING

DATE: 12/22/2004

PATENT APPLICATION: US/09/487,841

TIME: 15:09:45

Input Set : A:\seqlist.txt

Output Set: N:\CRF4\12222004\I487841.raw

```

820 <212> TYPE: PRT
821 <213> ORGANISM: Homo sapiens
823 <400> SEQUENCE: 42
824 Met Arg Arg Phe Leu Leu Tyr Ala Thr Gln Gln Gly Gln Ala Lys
825 1 5 10 15
826 Ala Ile Ala Glu Glu Ile Cys Glu Gln Ala Val Val His Gly Phe Ser
827 20 25 30
828 Ala Asp Leu His Cys Ile Ser Glu Ser Asp Lys Tyr Asp Leu Lys Thr
829 35 40 45
830 Glu Thr Ala Pro Leu Val Val Val Val Ser Thr Thr Gly Thr Gly Asp
831 50 55 60
832 Pro Pro Asp Thr Ala Arg Lys Phe Val Lys Glu Ile Gln Asn Gln Thr
833 65 70 75 80
834 Leu Pro Val Asp Phe Phe Ala His Leu Arg Tyr Gly Leu Leu Gly Leu
835 85 90 95
836 Gly Asp Ser Glu Tyr Thr Tyr Phe Cys Asn Gly Gly Lys Ile Ile Asp
837 100 105 110
838 Lys Arg Leu Gln Glu Leu Gly Ala Arg His Phe Tyr Asp Thr Gly His
839 115 120 125
840 Ala Asp Asp Cys Val Gly Leu Glu Leu Val Val Glu Pro Trp Ile Ala
841 130 135 140
842 Gly Leu Trp Pro Ala Leu Arg Lys His Phe Arg Ser Ser Arg Gly Gln
843 145 150 155 160
844 Glu Glu Ile Ser Gly Ala Leu Pro Val Ala Ser Pro Ala Ser Leu Arg
845 165 170 175
846 Thr Asp Leu Val Lys Ser Glu Leu Leu His Ile Glu Ser Gln Val Glu
847 180 185 190
848 Leu Leu Arg Phe Asp Asp Ser Gly Arg Lys Asp Ser Glu Val Leu Lys
849 195 200 205
850 Gln Asn Ala Val Asn Ser Asn Gln Ser Asn Val Val Ile Glu Asp Phe
851 210 215 220
852 Glu Ser Ser Leu Thr Arg Ser Val Pro Pro Leu Ser Gln Ala Ser Leu
853 225 230 235 240
854 Asn Ile Pro Gly Leu Pro Pro Glu Tyr Leu Gln Val His Leu Gln Glu
855 245 250 255
856 Ser Leu Gly Gln Glu Glu Ser Gln Val Ser Val Thr Ser Ala Asp Pro
857 260 265 270
858 Val Phe Gln Val Pro Ile Ser Lys Ala Val Gln Leu Thr Thr Asn Asp
859 275 280 285
860 Ala Ile Lys Thr Thr Leu Leu Val Glu Leu Asp Ile Ser Asn Thr Asp
861 290 295 300
862 Phe Ser Tyr Gln Pro Gly Asp Ala Phe Ser Val Ile Cys Pro Asn Ser
863 305 310 315 320
864 Asp Ser Glu Val Gln Ser Leu Leu Gln Arg Leu Gln Leu Glu Asp Lys
865 325 330 335
866 Arg Glu His Cys Val Leu Leu Lys Ile Lys Ala Asp Thr Lys Lys Lys
867 340 345 350
868 Gly Ala Thr Leu Pro Gln His Ile Pro Ala Gly Cys Ser Leu Gln Phe
869 355 360 365

```

RAW SEQUENCE LISTING

DATE: 12/22/2004

PATENT APPLICATION: US/09/487,841

TIME: 15:09:45

Input Set : A:\seqlist.txt

Output Set: N:\CRF4\12222004\I487841.raw

```

870 Ile Phe Thr Trp Cys Leu Glu Ile Arg Ala Ile Pro Lys Lys Ala Phe
871      370                      375                      380
872 Leu Arg Ala Leu Val Asp Tyr Thr Ser Asp Ser Ala Glu Lys Arg Arg
873 385                      390                      395                      400
874 Leu Gln Glu Leu Cys Ser Lys Gln Gly Ala Ala Asp Tyr Ser Arg Phe
875                      405                      410                      415
876 Val Arg Asp Ala Cys Ala Cys Leu Leu Asp Leu Leu Leu Ala Phe Pro
877                      420                      425                      430
878 Ser Cys Gln Pro Pro Leu Ser Leu Leu Leu Glu His Leu Pro Lys Leu
879                      435                      440                      445
880 Gln Pro Arg Pro Tyr Ser Cys Ala Ser Ser Ser Leu Phe His Pro Gly
881                      450                      455                      460
882 Lys Leu His Phe Val Phe Asn Ile Val Glu Phe Leu Ser Thr Ala Thr
883 465                      470                      475                      480
884 Thr Glu Val Leu Arg Lys Gly Val Cys Thr Gly Trp Leu Ala Leu Leu
885                      485                      490                      495
886 Val Ala Ser Val Leu Gln Pro Asn Ile His Ala Ser His Glu Asp Ser
887                      500                      505                      510
888 Gly Lys Ala Leu Ala Pro Lys Ile Ser Ile Ser Pro Arg Thr Thr Asn
889                      515                      520                      525
890 Ser Phe His Leu Pro Asp Asp Pro Ser Ile Pro Ile Ile Met Val Gly
891                      530                      535                      540
892 Pro Gly Thr Gly Ile Ala Pro Phe Ile Gly Phe Leu Gln His Arg Glu
893 545                      550                      555                      560
894 Lys Leu Gln Glu Gln His Pro Asp Gly Asn Phe Gly Ala Met Trp Leu
895                      565                      570                      575
896 Phe Phe Gly Cys Arg His Lys Asp Arg Asp Tyr Leu Phe Arg Lys Glu
897                      580                      585                      590
898 Leu Arg His Phe Leu Lys His Gly Ile Leu Thr His Leu Lys Val Ser
899                      595                      600                      605
900 Phe Ser Arg Asp Ala Pro Val Gly Glu Glu Glu Ala Pro Ala Lys Tyr
901                      610                      615                      620
902 Val Gln Asp Asn Ile Gln Leu His Gly Gln Gln Val Ala Arg Ile Leu
903 625                      630                      635                      640
904 Leu Gln Glu Asn Gly His Ile Tyr Val Cys Gly Asp Ala Lys Asn Met
905                      645                      650                      655
906 Ala Lys Asp Val His Asp Ala Leu Val Gln Ile Ile Ser Lys Glu Val
907                      660                      665                      670

```

E--> 908

Gly Val Glu Lys Leu Glu Ala Met Lys Thr Leu Ala Thr Leu Lys Glu

952 <210> SEQ ID NO: 44

953 <211> LENGTH: 698

954 <212> TYPE: PRT

955 <213> ORGANISM: Homo sapiens

957 <400> SEQUENCE: 44

958 Met Arg Arg Phe Leu Leu Leu Tyr Ala Thr Gln Gln Gly Gln Ala Lys

959 1 5 10 15

960 Ala Ile Ala Glu Glu Met Cys Glu Gln Ala Val Val His Gly Phe Ser

961 20 25 30

962 Ala Asp Leu His Thr Ile Ser Glu Ser Asp Lys Tyr Asp Leu Lys Thr

675

680

RAW SEQUENCE LISTING

DATE: 12/22/2004

PATENT APPLICATION: US/09/487,841

TIME: 15:09:45

Input Set : A:\seqlist.txt

Output Set: N:\CRF4\12222004\I487841.raw

```

963          35          40          45
964 Glu Thr Ala Pro Leu Val Val Val Ser Thr Thr Gly Thr Gly Asp
965          50          55          60
966 Pro Pro Asp Thr Ala Arg Lys Phe Val Lys Glu Ile Gln Asn Gln Thr
967 65          70          75          80
968 Leu Pro Val Asp Phe Phe Ala His Leu Arg Tyr Gly Leu Leu Gly Leu
969          85          90          95
970 Gly Asp Ser Glu Tyr Thr Tyr Phe Cys Asn Gly Gly Lys Ile Ile Asp
971          100          105          110
972 Lys Arg Leu Gln Glu Leu Gly Ala Arg His Phe Tyr Asp Thr Gly His
973          115          120          125
974 Ala Asp Asp Cys Val Gly Leu Glu Leu Val Val Glu Pro Trp Ile Ala
975          130          135          140
976 Gly Leu Trp Pro Ala Leu Arg Lys His Phe Arg Ser Ser Arg Gly Gln
977 145          150          155          160
978 Glu Glu Ile Ser Gly Ala Leu Pro Val Ala Ser Pro Ala Ser Leu Arg
979          165          170          175
980 Thr Asp Leu Val Lys Ser Glu Leu Leu His Ile Glu Ser Gln Val Glu
981          180          185          190
982 Leu Leu Arg Phe Asp Asp Ser Gly Arg Lys Asp Ser Glu Val Leu Lys
983          195          200          205
984 Gln Asn Ala Val Asn Ser Asn Gln Ser Asn Val Val Ile Glu Asp Phe
985          210          215          220
986 Glu Ser Ser Leu Thr Arg Ser Val Pro Pro Leu Ser Gln Ala Ser Leu
987 225          230          235          240
988 Asn Ile Pro Gly Leu Pro Pro Glu Tyr Leu Gln Val His Leu Gln Glu
989          245          250          255
990 Ser Leu Gly Gln Glu Glu Ser Gln Val Ser Val Thr Ser Ala Asp Pro
991          260          265          270
992 Val Phe Gln Val Pro Ile Ser Lys Ala Val Gln Leu Thr Thr Asn Asp
993          275          280          285
994 Ala Ile Lys Thr Thr Leu Leu Val Glu Leu Asp Ile Ser Asn Thr Asp
995          290          295          300
996 Phe Ser Tyr Gln Pro Gly Asp Ala Phe Ser Val Ile Cys Pro Asn Ser
997 305          310          315          320
998 Asp Ser Glu Val Gln Ser Leu Leu Gln Arg Leu Gln Leu Glu Asp Lys
999          325          330          335
1000 Arg Glu His Cys Val Leu Leu Lys Ile Lys Ala Asp Thr Lys Lys Lys
1001          340          345          350
1002 Gly Ala Thr Leu Pro Gln His Ile Pro Ala Gly Cys Ser Leu Gln Phe
1003          355          360          365
1004 Ile Phe Thr Trp Cys Leu Glu Ile Arg Ala Ile Pro Lys Lys Ala Phe
1005          370          375          380
1006 Leu Arg Ala Leu Val Asp Tyr Thr Ser Asp Ser Ala Glu Lys Arg Arg
1007 385          390          395          400
1008 Leu Gln Glu Leu Cys Ser Lys Gln Gly Ala Ala Asp Tyr Ser Arg Phe
1009          405          410          415
1010 Val Arg Asp Ala Cys Ala Cys Leu Leu Asp Leu Leu Leu Ala Phe Pro
1011          420          425          430

```

RAW SEQUENCE LISTING

DATE: 12/22/2004

PATENT APPLICATION: US/09/487,841

TIME: 15:09:45

Input Set : A:\seqlist.txt

Output Set: N:\CRF4\12222004\I487841.raw

```

1012 Ser Cys Gln Pro Pro Leu Ser Leu Leu Leu Glu His Leu Pro Lys Leu
1013          435                      440                      445
1014 Gln Pro Arg Pro Tyr Ser Cys Ala Ser Ser Ser Leu Phe His Pro Gly
1015          450                      455                      460
1016 Lys Leu His Phe Val Phe Asn Ile Val Glu Phe Leu Ser Thr Ala Thr
1017 465          470                      475                      480
1018 Thr Glu Val Leu Arg Lys Gly Val Cys Thr Gly Trp Leu Ala Leu Leu
1019          485                      490                      495
1020 Val Ala Ser Val Leu Gln Pro Asn Ile His Ala Ser His Glu Asp Ser
1021          500                      505                      510
1022 Gly Lys Ala Leu Ala Pro Lys Ile Ser Ile Ser Pro Arg Thr Thr Asn
1023          515                      520                      525
1024 Ser Phe His Leu Pro Asp Asp Pro Ser Ile Pro Ile Ile Met Val Gly
1025          530                      535                      540
1026 Pro Gly Thr Gly Ile Ala Pro Phe Ile Gly Phe Leu Gln His Arg Glu
1027 545          550                      555                      560
1028 Lys Leu Gln Glu Gln His Pro Asp Gly Asn Phe Gly Ala Met Trp Leu
1029          565                      570                      575
1030 Phe Phe Gly Cys Arg His Lys Asp Arg Asp Tyr Leu Phe Arg Lys Glu
1031          580                      585                      590
1032 Leu Arg His Phe Leu Lys His Gly Ile Leu Thr His Leu Lys Val Ser
1033          595                      600                      605
1034 Phe Ser Arg Asp Ala Pro Val Gly Glu Glu Glu Ala Pro Ala Lys Tyr
1035          610                      615                      620
1036 Val Gln Asp Asn Ile Gln Leu His Gly Gln Gln Val Ala Arg Ile Leu
1037 625          630                      635                      640
1038 Leu Gln Glu Asn Gly His Ile Tyr Val Cys Gly Asp Ala Lys Asn Met
1039          645                      650                      655
1040 Ala Lys Asp Val His Asp Ala Leu Val Gln Ile Ile Ser Lys Glu Val
1041          660                      665                      670

```

E--> 1042

Gly Val Glu Lys Leu Glu Ala Met Lys Thr Leu Ala Thr Leu Lys Glu 675

1086 <210> SEQ ID NO: 46

1087 <211> LENGTH: 697

1088 <212> TYPE: PRT

1089 <213> ORGANISM: Homo sapiens

1091 <400> SEQUENCE: 46

1092 Met Arg Arg Phe Leu Leu Leu Tyr Ala Thr Gln Gln Gly Gln Ala Lys

1093 1 5 10 15

1094 Ala Ile Ala Glu Glu Met Cys Glu Gln Ala Val Val His Gly Phe Ser

1095 20 25 30

1096 Ala Asp Leu His Cys Ile Ser Glu Ser Asp Lys Tyr Asp Leu Lys Thr

1097 35 40 45

1098 Glu Thr Ala Pro Leu Val Val Val Ser Thr Thr Gly Thr Gly Asp

1099 50 55 60

1100 Pro Pro Asp Thr Ala Arg Lys Phe Val Lys Glu Ile Gln Asn Gln Thr

1101 65 70 75 80

1102 Leu Pro Val Asp Phe Phe Ala His Leu Arg Tyr Gly Leu Leu Gly Leu

1103 85 90 95

1104 Gly Asp Ser Glu Tyr Thr Tyr Phe Cys Asn Gly Gly Lys Ile Ile Asp

Same
error

680

RAW SEQUENCE LISTING

DATE: 12/22/2004

PATENT APPLICATION: US/09/487,841

TIME: 15:09:45

Input Set : A:\seqlist.txt

Output Set: N:\CRF4\12222004\I487841.raw

```

1105          100          105          110
1106 Lys Arg Leu Gln Glu Leu Gly Ala Arg His Phe Tyr Asp Thr Gly His
1107          115          120          125
1108 Ala Asp Asp Cys Val Gly Leu Glu Leu Val Val Glu Pro Trp Ile Ala
1109          130          135          140
1110 Gly Leu Trp Pro Ala Leu Arg Lys His Phe Arg Ser Ser Arg Gly Gln
1111 145          150          155          160
1112 Glu Glu Ile Ser Gly Ala Leu Pro Val Ala Ser Pro Ala Ser Leu Arg
1113          165          170          175
1114 Thr Asp Leu Val Lys Ser Glu Leu Leu His Ile Glu Ser Gln Val Glu
1115          180          185          190
1116 Leu Leu Arg Phe Asp Asp Ser Gly Arg Lys Asp Ser Glu Val Leu Lys
1117          195          200          205
1118 Gln Asn Ala Val Asn Ser Asn Gln Ser Asn Val Val Ile Glu Asp Phe
1119          210          215          220
1120 Glu Ser Ser Leu Thr Arg Ser Val Pro Pro Leu Ser Gln Ala Ser Leu
1121 225          230          235          240
1122 Asn Ile Pro Gly Leu Pro Pro Glu Tyr Leu Gln Val His Leu Gln Glu
1123          245          250          255
1124 Ser Leu Gly Gln Glu Glu Ser Gln Val Ser Val Thr Ser Ala Asp Pro
1125          260          265          270
1126 Val Phe Gln Val Pro Ile Ser Lys Ala Val Gln Leu Thr Thr Asn Asp
1127          275          280          285
1128 Ala Ile Lys Thr Thr Leu Leu Val Glu Leu Asp Ile Ser Asn Thr Asp
1129          290          295          300
1130 Phe Ser Tyr Gln Pro Gly Asp Ala Phe Ser Val Ile Cys Pro Asn Ser
1131 305          310          315          320
1132 Asp Ser Glu Val Gln Ser Leu Leu Gln Arg Leu Gln Leu Glu Asp Lys
1133          325          330          335
1134 Arg Glu His Cys Val Leu Leu Lys Ile Lys Ala Asp Thr Lys Lys Lys
1135          340          345          350
1136 Gly Ala Thr Leu Pro Gln His Ile Pro Ala Gly Cys Ser Leu Gln Phe
1137          355          360          365
1138 Ile Phe Thr Trp Cys Leu Glu Ile Arg Ala Ile Pro Lys Lys Ala Phe
1139          370          375          380
1140 Leu Arg Ala Leu Val Asp Tyr Thr Ser Asp Ser Ala Glu Lys Arg Arg
1141 385          390          395          400
1142 Leu Gln Glu Leu Cys Ser Lys Gln Gly Ala Ala Asp Tyr Ser Arg Phe
1143          405          410          415
1144 Val Arg Asp Ala Cys Ala Cys Leu Leu Asp Leu Leu Leu Ala Phe Pro
1145          420          425          430
1146 Ser Cys Gln Pro Pro Leu Ser Leu Leu Leu Glu His Leu Pro Lys Leu
1147          435          440          445
1148 Gln Pro Arg Pro Tyr Ser Cys Ala Ser Ser Ser Leu Phe His Pro Gly
1149          450          455          460
1150 Lys Leu His Phe Val Phe Asn Ile Val Glu Phe Leu Ser Thr Ala Thr
1151 465          470          475          480
1152 Thr Glu Val Leu Arg Lys Gly Val Cys Thr Gly Trp Leu Ala Leu Leu
1153          485          490          495

```

RAW SEQUENCE LISTING

DATE: 12/22/2004

PATENT APPLICATION: US/09/487,841

TIME: 15:09:45

Input Set : A:\seqlist.txt

Output Set: N:\CRF4\12222004\I487841.raw

```

1154 Val Ala Ser Val Leu Gln Pro Asn Ile His Ala Ser His Glu Asp Ser
1155          500          505          510
1156 Gly Lys Ala Leu Ala Pro Lys Ile Ser Ile Ser Pro Arg Thr Thr Asn
1157          515          520          525
1158 Ser Phe His Leu Pro Asp Asp Pro Ser Ile Pro Ile Ile Met Val Gly
1159          530          535          540
1160 Pro Gly Thr Gly Ile Ala Pro Phe Ile Gly Phe Leu Gln His Arg Glu
1161 545          550          555          560
1162 Lys Leu Gln Glu Gln His Pro Asp Gly Asn Phe Gly Ala Met Trp Phe
1163          565          570          575
1164 Phe Gly Cys Arg His Lys Asp Arg Asp Tyr Leu Phe Arg Lys Glu Leu
1165          580          585          590
1166 Arg His Phe Leu Lys His Gly Ile Leu Thr His Leu Lys Val Ser Phe
1167          595          600          605
1168 Ser Arg Asp Ala Pro Val Gly Glu Glu Glu Ala Pro Ala Lys Tyr Val
1169          610          615          620
1170 Gln Asp Asn Ile Gln Leu His Gly Gln Gln Val Ala Arg Ile Leu Leu
1171 625          630          635          640
1172 Gln Glu Asn Gly His Ile Tyr Val Cys Gly Asp Ala Lys Asn Met Ala
1173          645          650          655
1174 Lys Asp Val His Asp Ala Leu Val Gln Ile Ile Ser Lys Glu Val Gly
1175          660          665          670

```

E--> 1176

Val Glu Lys Leu Glu Ala Met Lys Thr Leu Ala Thr Leu Lys Glu Glu

675

680

*Same
error*

RAW SEQUENCE LISTING ERROR SUMMARY
PATENT APPLICATION: US/09/487,841

DATE: 12/22/2004
TIME: 15:09:46

Input Set : A:\seqlist.txt
Output Set: N:\CRF4\12222004\I487841.raw

Invalid Line Length:

The rules require that a line not exceed 72 characters in length. This includes spaces.

Seq#:21; Line(s) 405
Seq#:22; Line(s) 495
Seq#:23; Line(s) 584
Seq#:25; Line(s) 654
Seq#:26; Line(s) 662
Seq#:27; Line(s) 670
Seq#:28; Line(s) 678
Seq#:29; Line(s) 686
Seq#:30; Line(s) 694
Seq#:31; Line(s) 702
Seq#:32; Line(s) 710
Seq#:33; Line(s) 718
Seq#:34; Line(s) 726
Seq#:35; Line(s) 734
Seq#:36; Line(s) 742
Seq#:37; Line(s) 750
Seq#:38; Line(s) 758
Seq#:39; Line(s) 766
Seq#:40; Line(s) 774
Seq#:42; Line(s) 908
Seq#:44; Line(s) 1042
Seq#:46; Line(s) 1176

VERIFICATION SUMMARY

DATE: 12/22/2004

PATENT APPLICATION: US/09/487,841

TIME: 15:09:46

Input Set : A:\seqlist.txt

Output Set: N:\CRF4\12222004\I487841.raw

L:405 M:252 E: No. of Seq. differs, <211> LENGTH:Input:698 Found:672 SEQ:21 ✓
L:495 M:252 E: No. of Seq. differs, <211> LENGTH:Input:682 Found:656 SEQ:22 ✓
L:584 M:360 E: Sequence data overflow, line data truncated, for SEQ ID#:23 ✓
L:584 M:252 E: No. of Seq. differs, <211> LENGTH:Input:677 Found:656 SEQ:23 ✓
L:654 M:333 E: Wrong sequence grouping, Amino acids not in groups!
L:662 M:333 E: Wrong sequence grouping, Amino acids not in groups! ✓
L:670 M:333 E: Wrong sequence grouping, Amino acids not in groups! ✓
L:678 M:333 E: Wrong sequence grouping, Amino acids not in groups! ✓
L:686 M:333 E: Wrong sequence grouping, Amino acids not in groups!
L:694 M:333 E: Wrong sequence grouping, Amino acids not in groups!
L:702 M:333 E: Wrong sequence grouping, Amino acids not in groups! ✓
L:710 M:333 E: Wrong sequence grouping, Amino acids not in groups!
L:718 M:333 E: Wrong sequence grouping, Amino acids not in groups!
L:726 M:333 E: Wrong sequence grouping, Amino acids not in groups!
L:734 M:333 E: Wrong sequence grouping, Amino acids not in groups!
L:742 M:333 E: Wrong sequence grouping, Amino acids not in groups! ✓
L:750 M:333 E: Wrong sequence grouping, Amino acids not in groups! ✓
L:758 M:333 E: Wrong sequence grouping, Amino acids not in groups! ✓
L:766 M:333 E: Wrong sequence grouping, Amino acids not in groups!
L:774 M:333 E: Wrong sequence grouping, Amino acids not in groups!
L:908 M:252 E: No. of Seq. differs, <211> LENGTH:Input:698 Found:672 SEQ:42 ✓
L:1042 M:252 E: No. of Seq. differs, <211> LENGTH:Input:698 Found:672 SEQ:44 ✓
L:1176 M:252 E: No. of Seq. differs, <211> LENGTH:Input:697 Found:672 SEQ:46 ✓